City of Atka
Health Clinic Design Study Report

Prepared for:

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List of Abbreviations

ADA	Americans with Disabilities Act
ANCSA	Alaska Native Claims Settlement Act
ANILCA	Alaska National Interest Lands Conservation Act
ANTHC	Alaska Native Tribal Health Consortium
APIA	Aleutian/Pribilof Islands Association
APICDA	Aleutian/Pribilof Island Community Development
ARPCR	Alaska Rural Primary Care Facility
Atxam	Atxam Corporation
BIA	Bureau of Indian Affairs
BLM	Bureau of Land Management
CD	Compact Disk
CDQ	Community Development Quota
CFR	Code of Federal Regulations
CHA	Community Health Aide
CHP	Community Health Practitioner
CHR	Community Health Representative
City	City of Atka
CLIA	Clinical Laboratory Improvement Amendments
DCED	Department of Community and Economic Development
DOT&PF	Alaska Department of Transportation and Public Facilities
DOWL	DOWL Engineers
ECI/Hyer	ECI/Hyer Incorporated
FAA	Federal Aviation Administration
GFCI	Ground Fault Circuit Interrupter
HMS	HMS Incorporated
HDR	HDR Alaska, Incorporated
IHS	Indian Health Services
IRA	Indian Reorganization Act
MLT	Municipal Land Trustee
NEC	National Electric Code
NFPA	National Fire Protection Association
ROW	Right-of-Way
sf	Square Foot (Feet)
UBC	Uniform Building Code
WIC	Women, Infants, and Children

1.0 INTRODUCTION

The City of Atka (City) has expressed a desire to improve the health care facilities for its residents. A new clinic is a top priority expressed by residents, the City Council, and the Atka Indian Reorganization Act (IRA) Council. This health clinic feasibility study was prepared to assist the City in replacing the existing facility, which has become too small and inefficient to effectively administer proper medical services.

The City retained the services of HDR Alaska, Inc. (HDR) along with its sub-consultants to assist in the feasibility study for the new facility.

This feasibility study includes preliminary design information and is the first part of a multiple-step process leading to the construction of a new health clinic. The initial design ideas presented in this document represent the foundation of the design. The study and preliminary design information was developed with input from the community. This document will also help complete the Denali Commission health care funding proposal for Rural Primary Care Facilities.

2.0 COMMUNITY BACKGROUND

2.1 Location

The City of Atka is located on Atka Island, along the central arc of the Aleutian Island chain, and approximately 90 air miles east of Adak. It is 1,100 air miles southwest of Anchorage. The approximate coordinates are 174°12' West longitude by 52°12' North latitude. The nearest medical facility outside of the City is in Unalaska, about 350 air miles to the east. The closest hospitals are in Anchorage, located 1,100 miles away. This isolation magnifies the importance of reliable health care facilities in Atka.

2.2 Climate

Atka is located in the maritime climate zone, with temperatures ranging from 20-60°F. The average summer temperature range is 44-60°F, and the average winter temperature range is 20-36°F. There are frequent severe storms in the winter, and calm, foggy weather in the summer. The average annual precipitation is 60 inches.

2.3 Transportation

Because Atka is an island, the only means of travel in and out of the City are by air or by boat. Transportation in and out of the City can be erratic, depending on weather. Atka currently has a state-operated 3,100-foot lighted paved runway. The runway site is owned by the City and leased to the state for airport operations. In 2001, the Federal Aviation Administration (FAA) provided funding to conduct and update the airport master plan study for Atka. Both the FAA and the Alaska Department of Transportation and Public Facilities (DOT&PF) have planned projects for extending, widening, strengthening, and resurfacing the airport runway. Scheduled air services are available twice weekly from Unalaska. Floatplanes or amphibious planes can be chartered and these land in Nazan Bay. Coastal Transportation provides freight service from

May to October, and a Bureau of Indian Affairs (BIA) barge delivers supplies once per year. A dock and port facility, operated by the City, was recently completed across the bay.

2.4 Financial Profile and Economy of Atka

The economy of Atka is largely based on fishing and subsistence. According to the Department of Community and Economic Development (DCED), nine residents hold commercial fishing permits. Atka Pride Seafoods, a local seasonal fish processing plant, serves the local fleet of approximately 45 boats and provides direct employment for approximately 30 Atka residents from May through September. Year-round income opportunities in the community are limited to education and government-related work.

The median household income is approximately $30,938, and the per capita income is $17,079, with seven people below the poverty line, according to DCED community database using the 2000 Census information. Of the 79 available workers (persons over 16 years of age) in the City, 56 are employed in the following occupations: management, professional, and related (13); service (21); sales and office (17); production, transportation and material moving (5).

The DCED municipal finance report listed a revenue of $505,614 for the City in 2000. The total local operating revenue totaled $76,358 from local sources (including taxes, service charges, enterprise, and other sources) and $168,011 from outside revenue (from state and federal sources). The capital project revenue totaled $261,245 in 2000.

2.5 Population

The current population of Atka is 102 (120 in summer), established by a State Demographer in 2002. The population of Atka has remained relatively steady for the past five years, but has changed erratically during the course of its history. This trend can also be seen in neighboring communities, according to Aleutian/Pribilof Islands Community Development Association (APICDA). The fishing industry is expected to expand in the Atka area. The tourism industry has also increased, boosting the area's economy. For these reasons, it is expected that the City and surrounding communities will grow in population and expand into new lands.

A growth rate of 2% has been used to estimate the rate at which the population of Atka and the surrounding area will grow in the next 20 years. The historical population and future population projections for Atka are shown in Figure 2.1. The population spike seen in 2004 is expected to result from a projected fish plant expansion requiring more full-time labor. It was indicated by APICDA that much of this labor would come from outside Atka.

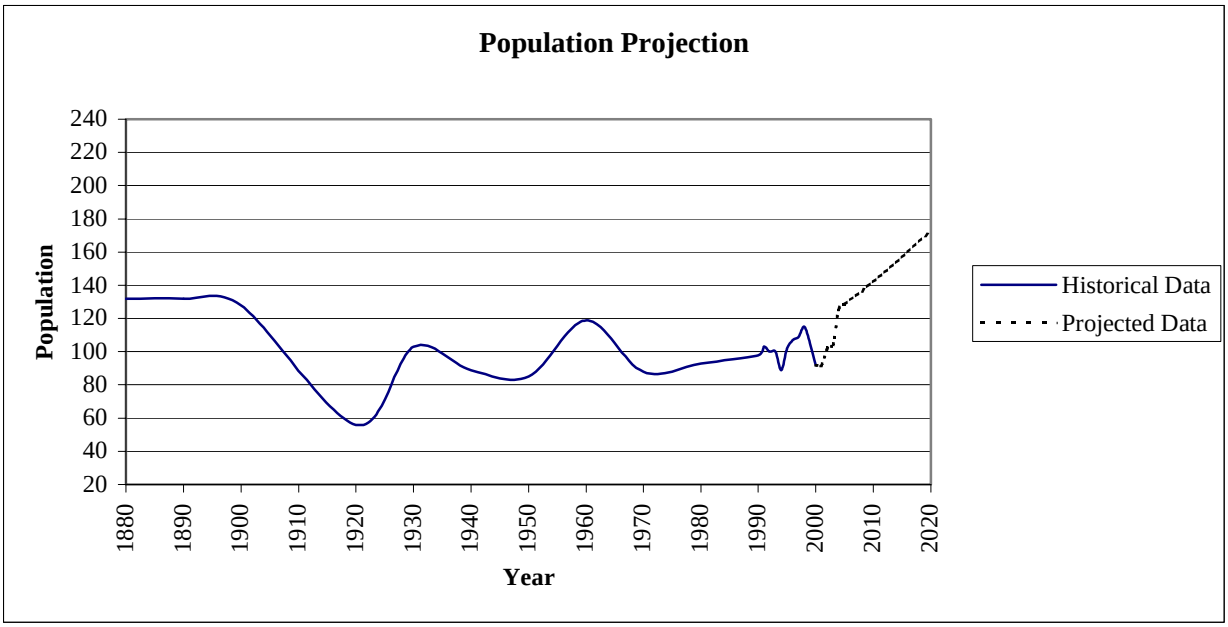

Figure 2.1: Historical Population and Population Projections for Atka, Alaska.

Figure 2.1 shows that the population of Atka could increase to 173 people in 2020. This value was calculated using a 2% growth rate, which assumes that positive growth will occur in the community after an expansion of the local fish processing facility.

2.5.1 Housing Condition

The City was burned by the Navy during World War II to keep it from falling into Japanese hands, all but three houses were re-built after the fires. Several years ago, six homes were renovated with BIA Housing Improvements funds. Another is currently undergoing renovation to replace a bathroom sink and shower. The housing is fairly dense, and utility lines are located on private lots with no dedicated easements. The available aerial photos are outdated and show buildings that no longer exist, and do not show improvements and/or some of the newer structures. The City is considering the need to dismantle some of the older, vacant homes because of the vandalism that has occurred in the last couple of years.

2.5.2 Residential Expansion

The residential properties are spread out in two different areas in the community. The first and original development is called old town. The old town site is near capacity and no longer has lots available for residential expansion. Any significant residential expansion, as identified by the Council, will need to occur in the expanded area of the City called "new Atka subdivision" located approximately 1-mile northwest of old town. The two areas of town are shown on Figure 2.2.

2.5.3 Fishing Industry Development

The local economy is dependent upon commercial fishing. In the 1980s, the community developed a small-scale fish processing plant. Recently, the Community Development Quota (CDQ) program has provided the resources to expand the fish plant and make larger boats available to local fisherman, in addition to increasing the CDQ for Atka from 630,000 pounds to 900,000 pounds.

Atka Pride Seafoods, which currently processes halibut and black cod, would like to expand its operation to process other species of cod, as well as pursue aquaculture opportunities. There are also plans to increase the plant to year-round operations. Expansion of the Atka Pride Seafood operation in Atka will create an estimated increase of up to 20 employees in the number of seasonal workers residing in Atka, according to Joe Kyle at APICDA.

Along with upgrades to the plant, APICDA support services planned for the fishing industry at Atka include a warehouse for dry goods storage and fuel services for the fishing fleet. Construction of the plant upgrades and other services is expected to occur in 2004 or 2005, according to Joe Kyle at APICDA.

Another potential income generator in the City is crab pot storage. The Atxam Corporation (Atxam) has expressed interest in supporting this endeavor. Atxam is the Native Village Corporation in Atka. The Aleut Corporation in Adak recently lowered its storage costs, which would create competition should the City decide to develop this type of business in the future. However, if the crab pot storage business is established in Atka, it could attract more year-round residents.

2.6 Flood/Seismic Hazard

Atka is located in seismic zone 4. The northeast part of Atka Island encompasses the Atka Volcanic center, which is the largest eruptive center in the central part of the Aleutian Island chain. The two largest volcanoes are Mount Kliuchef and Korovin Volcano, which are surrounded by several smaller and younger volcanoes. Korovin, located approximately 13 miles north of the City, has been active during historic times and most recently showed activity in June 1998.

The U.S. Army Corps of Engineers rates the flood hazard for the City as low, although they state that a teleseismic tsunami is possible.

3.0 EXISTING HEALTH CARE FACILITY

The Denali Commission classifies the existing Atka health clinic as a Group 4 “Small” Primary Care Clinic. The clinic is located on the bottom floor of a two-story facility in the southwest corner of old Atka subdivision, referred to as “old town”. This building was constructed in 1983 and has approximately 1,920 square feet (sf) of floor space. The clinic operations occupy the first floor of the building, which is approximately 673 sf or slightly more than one-third of the total building space. The second floor of this building is used by the City as office space and quarters for visitors.

The existing clinic primarily serves Atka residents and businesses, including Atka Pride Seafoods. The clinic also serves area fishing fleets on a seasonal basis. Patient records show that the clinic saw an average of 134 patients per month in 2001, 63 patients per month in 2000, and 85 patients per month in 1999. These records indicate a general trend of increasing patients over the last three years.

There are a total of seven full- or part-time positions associated with the existing clinic. The Aleutian/Pribilof Islands Association (APIA) provides a Community Health Practitioner (CHP), a Community Health Aide (CHA), and a Community Health Representative (CHR). The City employs a part-time janitor to clean the clinic daily and a part-time maintenance worker to complete repairs on an as-needed basis. Payroll and purchasing is the responsibility of the City Clerk, and the City Assistant Administrator supervises the maintenance and repairs of the building. In addition to the full-time positions at the clinic, there are transient medical personnel who travel to the community periodically. An additional CHP and a doctor travel to Atka twice a year and stay for approximately four days each trip. A dentist and an optometrist travel to the community once a year. School age children are given first priority to the dental and optical services, which limits the opportunity for adults to obtain examinations from the traveling physicians.

The clinic is primarily a basic health care facility, but it can provide limited emergency services until other medical facilities are available. Currently, the clinic provides the following services:

- Family health care
- Emergency medical treatment
- Prenatal and perinatal services
- Breast cancer and cervical cancer screening
- Well-child services
- Immunizations
- Supplemental nutrition program for women, infants, and children (WIC)
- Family planning services
- Preventative dental services
- Patient education

The CHP in Atka indicates that the clinic provides substance abuse diagnosis on an itinerant basis. However, treatment of these cases is referred to Unalaska, as is all mental health diagnosis and treatment. Minor dental services are provided at the clinic. Preventative dental treatment services are provided every Tuesday at the school with fluoride rinses. Major dental work is referred to facilities in Unalaska.

The clinic can offer limited emergency medical services, such as:

- First responder
- Ambulance service
- Radio/phone communications between clinic and emergency medical personnel

Currently, the clinic is not capable of providing advanced cardiac life support, nor does it have a dedicated area for treating emergency patients.

The clinic also has minimal laboratory and pharmaceutical capabilities. The services provided are:

- Clinical Laboratory Improvement Amendments (CLIA) waived tests
- Specimen collection for shipment to a referral lab
- Provider-performed microscopy
- Pharmacy services

Ultrasound, x-ray, and mammography are not provided as part of the lab services.

The clinic has full utility services for water, wastewater, electricity, telephone, and forced air heating. Water is supplied to the clinic from the community water supply. A 30-gallon electric water heater provides hot water. The clinic is connected to the City wastewater system, serviced by a 4-inch line. However, reports indicate that many of the fixtures have leaks. The most notable leak is from the toilet when it is flushed. Electricity and telephone are provided by one underground service connection to the building. Both meters are located inside the utility room with disconnects at the main electrical panel. A residential-grade, oil-fired boiler made of cast iron heats the building. Reports from the clinic say that the facility is often uncomfortably cold during the winter, most likely due to insufficient insulation. Fuel for the boiler is provided from one 55-gallon on-site storage tank located at the back of the clinic.

3.1 Existing Facility Assessments

A facility assessment, completed by DOWL Engineers (DOWL) in November of 1999 for APIA, states that the building is structurally sound, but the space is inadequate for clinic programs and services. The 1999 DOWL report recommends that the clinic needs approximately 2,200 sf to adequately provide for the clinic programs. The report addresses the fact that the current building does not meet building regulations pertaining to fire, life, safety, and handicapped access.

In 2002, the Alaska Native Tribal Health Consortium (ANTHC) completed both a Facility Assessment and Inventory Report, and a Code and Conditions Report. Numerous deficiencies were identified in this assessment, with the major deficiency being lack of space. ANTHC recommends 1,989 sf to meet current needs as defined in the Alaska Rural Primary Care Facility (ARPCR) space guidelines. Below is a summary of the major deficiencies found by ANTHC. The complete ANTHC survey is available on a compact disk (CD) in Appendix A.

3.1.1 Major Existing Deficiencies

Space Issues

- Lack of overall space (lacks approximately 1,050 sf of space)
- Specific space deficiencies include rooms that are too small and lack of storage space
- Lack of dedicated space for patient holding, health education or conferences, and custodial equipment and supplies

- Pharmacy and laboratory space is crowded
- Oxygen tanks are stored in hallways (separate storage areas should be provided for tanks to meet National Fire Protection Association (NFPA) 99 requirements)

Program Issues

- Handling of medical/infectious waste is hampered by small size of facility
- Control of infection is hampered by deteriorated floors and non-code compliant sinks
- Patient privacy is limited due to space constraints, sight lines are not screened from the waiting room, and walls have no sound protection

Utilities

- Plumbing fixtures leak; toilet has noticeable leaks after every flush
- Plumbing fixtures do not meet Americans with Disabilities Act (ADA) or Uniform Building Code (UBC) requirements
- Various electrical and wiring deficiencies
- Water heater is inaccessible due to storage issues

Architectural/Structural

- Exterior decks and ramps do not meet UBC and ADA requirements
- Exterior door frames and hardware need to be replaced
- Interior flooring is worn
- Interior doors are not ADA compliant
- Arctic design is inadequate

Mechanical Condition

- Various deficiencies related to fuel storage
- Lack of proper ventilation system

Electrical Condition

- Numerous wiring deficiencies
- Water heater has exposed wires
- Lack of proper emergency lighting and signage
- Exterior light fixtures do not meet electrical codes
- Receptacles near sinks are not protected with a ground fault circuit interrupter (GFCI) as required by the National Electric Code (NEC)
- Lighting levels found to be low throughout clinic

Civil condition

- Unsuitable site for expansion
- Site is not located in a central location

3.1.2 Community Survey

A survey was distributed by HDR to residents to evaluate the community's opinion of the health clinic. A total of 30 households responded to the survey, 18 of these were from the new

subdivision, 10 were from the old village, and 2 were from the school. Typically there were 15-20 responses for each of the questions asked on the survey. A summary of the completed survey responses and the analysis figures are available in Appendix B.

The first portion of the survey identifies clinic use. Respondents of the surveys answered that 37 percent of adults used the clinic once per month, while 28 percent used the clinic one time per week. Other frequencies of use ranged from once per day to once per year with 5-10% of the respondents selecting these frequencies. When asked about frequency of use for children, 40% of the respondents answered that they did not have children. Of the families that did have children, 24 percent used the clinic once per month. The next most popular answers for usage were once per week (12%) and twice per year (12%). Generally, both adults and children use the facility on a monthly to weekly basis. Another question addressing clinic use asked if there was a time where the clinic was needed but not open. Slightly over half of the respondents (53%) answered affirmatively that there were occasions when they needed the clinic when it was not open, 41% answered that they did not have a need for different hours, and one respondent did not know. Of the respondents that did experience a time where the clinic was needed but not open, most commented that this was during holiday times. Others mentioned that they had visited the clinic during operational hours, but it was closed for unknown reasons.

The second section of the survey inquired about clinic location. The majority of the respondents (90%) did not have a problem with the existing clinic location (old town). Of the 10% that did express concerns, the respondents felt the clinic could have been protected from the wind better, and in a more centralized location between the two community areas. When asked where the respondents would like to see a new clinic location 76 percent answered that the between the two subdivisions was desired. Other possible locations, which received one answer each, included closer to either old town or the Atka Subdivision and near a road. The majority (65%) of respondents did not feel that location would affect usage. The respondents that answered that location would affect usage were concerned about access during wintertime. Currently, the clinic shares functions with the City by sharing space in the upstairs for offices. If a new clinic were built one question during the proposal and design phase would be if the new facility should again share services with another organization. The majority of respondents (68%) did not want the new facility to share with another organization. Most participants who did not want shared facilities were concerned with privacy issues for the clinic. This is understandable considering that lack of privacy and comfort for patients was considered a major deficiency in the existing clinic during the ANTHC site analysis. If privacy considerations are addressed during design, the new facility residents may be more agreeable for the clinic to share space with another organization. Thirty two percent of the respondents did not care if the facility was shared, and were agreeable to sharing, if sharing reduced costs.

The next section of the survey pertained to service questions. The participants were asked what services they used most often at the clinic. Nearly half of the respondents (46%) used the clinic for check-ups. Another large portion of respondents (35%) used the clinic to refill prescriptions. Some patients used the clinic for blood work and during times of illness. When asked if there was ever a time where a service was needed, but not available at the clinic, 56% of the participants answered affirmatively. The majority of services that were needed, but not available were x-rays (55%), however, dental, optical, counseling and specialized prescription refills were

also mentioned. The survey participants were asked what services were needed at the clinic in addition to routine medical care. Popular requests for additional services included additional dental services (30%), emergency services (29%), substance abuse counseling (22%), and mental health counseling (17%). These are consistent with the prior question of services that were needed but not available at the Atka health clinic. The survey participants were also asked how health care service in Atka could be improved. The most popular responses (37%) were for increased space at the facility and better plane service to Atka for the itinerate doctors. Other respondents (13%) indicated that they would like the clinic to comply with current building codes, and for the itinerate doctors to come more frequently.

Finally, the last question asked was how medical expenses were paid. The majority (52%) of clinic patients use Indian Health Services (IHS) for health expenses. However, Medicaid, Medicare, and private insurance claims pay for approximately 28% of clinic patient expenses.

Overall, the residents of Atka take full advantage of the services available from the clinic. Most likely this is the only health care available to the residents because travel to outside clinics in Dutch Harbor or Anchorage is cost prohibitive. Many of the residents feel improvements could be made to the health clinic including additional space and increased availability and services.

4.0 PROPOSED HEALTH CARE FACILITY

Due to the deficiencies associated with the existing clinic, the City of Atka has expressed an interest in either renovating and expanding the existing building, or constructing a new structure for the clinic.

The facility assessments completed by both DOWL and ANTHC determined that it was more practical to construct a new facility rather than renovate the existing structure. The decision was made based on the Denali Commission standard of evaluation. This standard states that new construction is viable if the cost of repair/renovation and addition exceeds 75% of the cost of new construction.

Table 4-1. Clinic Cost Comparisons

Facility Assessment	New Stand-Alone Clinic	Existing Clinic Renovate/ Repairs	New Multi-Use Facility (Cost of Clinic Space Only)
DOWL - 1999	$1,279,000 (2,200 sf)	$876,000 (2,250 sf)	$1,060,000 (2,200 sf)
ANTHC - 2002	$684,000 (2,000 sf)	$982,661 (1,989 sf)	N/A

According to the DOWL assessment, the cost of renovating both floors of the existing clinic and adding two new stair towers to the building will cost approximately 68.5% of the cost of constructing a new stand-alone facility. Although this is below the 75% threshold for recommending a new structure, it should be noted this alternative would not bring the upper floor into compliance with ADA building codes, as the new stairs would not be handicap accessible. This alternative would also relocate the City Office and upstairs apartments. The cost for replacing these facilities is not included in the renovation and repair cost calculated by DOWL. If costs were included for modifying the structure with either a ramp or an elevator to allow

handicapped access to the second floor and replacing new space for the City Office and apartments, it would most likely exceed the 75% cost recommendation level set by the Denali Commission. Furthermore, DOWL recommends that a multi-use facility replace the existing clinic. This multi-use facility would provide space for the clinic and a tribal community center. The total square footage of the multi-use building would be 4,400, with the clinic using 2,200 sf of the space.

The ANTHC assessment has the cost of renovating and expanding the existing clinic at nearly 1.5 times the cost of a new clinic. This exceeds the recommendation level for a new structure based on the Denali Commission standards.

A new health clinic is a top priority of the residents of the community as well as the Atka IRA Council. A community visioning exercise completed in 1994 identified a new clinic as one of three top priorities by residents. The City of Atka passed Resolution 01-283 and the Native Village of Atka passed Resolution 2001-03. Both resolutions state that a new health clinic is a priority. These resolutions are provided in Appendix C.

The new clinic will provide sufficient space for staff and program needs, as well as meeting requirements for privacy, handicapped access, fire safety, and health care programs.

After discussions with current staff, City administrators, and completion of the community survey (results are provided in Appendix B), several goals were developed for this project.

- Improve overall health care environment
- Provide sufficient space for staff and program needs
- Increase usable storage space
- Provide space for emergency treatment
- Meet all building codes and regulations
- Integrate telemedicine into the facility
- Reduce annual repair and maintenance costs

Discussions with the community regarding the capital cost and the goals listed above have brought about the recommendation of a shared, multi-use building that would house the clinic. This building has been sized to include the necessary square footage of the clinic and an estimated additional square footage for other users. The total square footage of the proposed building is 4,455 sf. This includes 2,202 sf being allocated for clinic space, and the remaining 2,253 sf for other potential users.

5.0 CLINIC OPERATION

The new clinic will be operated as a standard care clinic, although the Atka clinic, as with many rural clinics, must be operated as a small hospital while waiting for medical evacuation during delays caused by severe weather.

All the services that are provided by the current clinic facility, summarized in section 3.0, will also be offered in the new facility. In addition, new services will be introduced in response to

requests from medical staff and the community. The new services will center on emergency care and telehealth capabilities.

The new services available for emergency care will incorporate:

- Ability to provide advanced cardiac life support at the clinic
- Dedicated area for dealing with emergency patients

Telehealth services provide a network to send data, digital images, video, and voice between local health care providers and referring health care providers. Examples of telehealth systems include telepyschiatry, connecting patients and mental health providers with videoconferencing technology equipment; telecardiology, using electronic stethoscopes capable of sending sound transmissions; and teleorthopedics, using digital images for diagnostic assistance.

A facility in Petersburg, Alaska has been successfully using telehealth equipment for the past five years. More recently, King Cove, a clinic with similar isolation concerns, has completed and installed telemedicine capabilities. Telehealth technology offers the opportunity for isolated communities to interact and tap into resources of larger more developed facilities.

Figure 5.1 includes a preliminary space breakdown for a new multi-use facility that provides sufficient space for clinic programs and operations. Noticeable changes include dedicated areas for a waiting area, urgent care, dental and specialty care, storage and laundry, and staffing/administrative areas. Each of these space allocations is in response to deficiencies in the current clinic facility found during ANTHC, DOWL, HDR, and community inspections.

6.0 PROJECT SITE ANALYSIS/SELECTION

The first step in constructing a new facility is to find a suitable location. Seven sites were analyzed as possible locations for the new clinic. Figure 6.1 shows the location of each of the seven sites. All of the sites listed are adjacent to the existing road system. Table 6-1 discusses the advantages and disadvantages of each location alternative that were provided to the City to assist in the determination of the preferred site.

Table 6-1. Advantages and Disadvantages for Site Location Alternatives

Site #	Description	Advantages	Disadvantages
1	Existing Clinic Lot	• Existing City Parcel • Connect to existing water/sewer with minimal piping	• Site too small to accommodate another structure (0.13 acres), would require demolition
2	West side of Atxax Way in old town. Open area next to church.	• Near Community Building • Space available for parking • Fairly flat terrain • Connect to existing water/sewer with minimal piping	• Need to select land for 14(c)(3) allotment • Groundwater may be an issue
3	Location of abandoned carpentry shop. Lot 7 in old town.	• Existing City parcel • Possibility of using existing structure • Connect to existing water/sewer	• Steep terrain on lot • Lot size too small to allow for adequate parking (0.16 acres) • Sewer main downstream of site needs

Site #	Description	Advantages	Disadvantages
		with minimal piping	repair before usable
4	West side of Atxax Way. North of old town across from water storage tank site.	• Fairly central location, high ground	• Need to select land for 14(c)(3) allotment • Extensive piping needed to connect existing water/sewer utilities • Sewer main downstream of site needs repair before usable • Site grading issues will need to be addressed
5	North side of Atxax Way, across from Lot 8 in old town	• Connect to existing water/sewer with minimal piping	• Need to select land for 14(c)(3) allotment • Steep terrain in area
6	Lot 64 near Atka Subdivision. West of Atxax Way next to Fire Station.	• Existing City parcel • Flat terrain on lot	• Extensive piping needed to connect existing water utility • Sewer would need to be pumped to Atka Subdivision sewer line or an onsite system installed • Eliminates possible use of site as tank farm in future
7	Quonset hut and water storage tank location (Lot 44)	• Existing City parcel • Central location between old town and Atka Subdivision • Community approves of location • Located on higher ground	• Access slope (11%) might pose problems for elderly or sick and could become slippery in winter • Site grading will need to be addressed • Extensive piping needed to connect existing water/sewer utilities (100' for water, 300' for sewer) • Sewer main downstream of site needs repair before usable

6.1.1 Selected Site

The Atka City Council reviewed the alternatives and selected Site #7 as the preferred site. The IRA Council has passed a resolution supporting the City's plans. This site was chosen due to its location in a more centralized area between old town and the Atka Subdivision, as well as for its location on higher ground, free from possible marine natural disasters. Site control has been granted to the City. This information is detailed in Section 9, Land Status. Figure 9.1 is the final Alaska Native Claims Settlement Act (ANCSA) map of boundaries submitted to the Bureau of Land Management (BLM).

Figure 6.2: Photograph of Site Number 7, Preferred Site Location for New Clinic.

Chet Crafts with ANTHC was concerned with the selection of this site as the preferred location. His concern addressed issues of accessibility for the elderly as well as distance from existing

utilities. These comments were made after his visit the week of March 25, 2002 when he was completing the Code and Conditions survey. HDR commissioned a site survey of the City's selected site and found the slope to be between 8-11%. HDR feels site grading issues will need to be addressed in the design of the clinic. Because the lot is sloped, cut and fill quantities will need to be balanced to help reduce costs and assure that the clinic footprint will fit the lot size.

Figure 6.3: Photograph of Site Number 7, Preferred Site Location for New Clinic.

In general, Denali Commission funds cannot be used to pay for making water and wastewater connections over 150 feet. In the project proposal submitted to Denali Commission, documentation must be attached addressing the cost and payment plan for utility connections more than 150 feet from existing water, sewer, electricity, or telephone.

A sewer line extension must be constructed to attain this 150-foot limitation. This extension will be completed by a City crew either prior to or in conjunction with clinic construction. This sewer main extension is discussed in more detail in Section 7.2.

7.0 CONCEPTUAL DESIGN

Based on program space demands, a preferred site selection, and input from the community, a conceptual design has been developed. This conceptual design is site-specific and will illustrate project development, which is necessary to receive funding for full design, obtaining necessary permits and environmental and archaeological clearances, and other pre-construction tasks.

7.1 Building Layout

The conceptual floor plan represents an efficient response to the need for a new clinic and civic facilities in the City of Atka. By connecting the clinic, city offices, post office, and local corporation's offices, the building is able to become a true civic center for Atka. Cost savings are generated for all parties through the use of shared meeting space, mechanical systems, and support functions. The design allows the clinic portion of the building to be secured at night while still permitting after-hours use of the remainder of the building. Itinerant accommodations are also provided in a manner that allows after-hours access without passing through the clinic.

The Denali Commission Medium Clinic Prototype served as a guideline that was adapted to the selected site and specific needs for Atka. The building is oriented to allow for views of the city and harbor, and allow the neighboring building and water tank to help assuage high winds. Figure 7.1 portrays the organization of the proposed multi-use structure whereas Figure 7.2 portrays the conceptual layout. Figure 7.3 is a site plan with the conceptual layout placed on the lot.

7.2 Utilities

Water and electrical service will be extended 100 feet to the clinic site with Denali Commission funding. Water will be provided by a 50-foot service, tapped into the existing treated water line coming from the water treatment building, near the 30,000-gallon storage tank located behind the site.

Buried electric lines will be extended to serve the new clinic's electrical needs. A back-up generator will also be installed on-site to provide emergency power should electrical service be interrupted.

The clinic's sewer needs will be served by approximately 300 feet of 6-inch ductile iron sewer main. Approximately 200 feet of the new sewer main will be an extension to the existing gravity sewer main in the old town that will tie into a manhole near Lot 8. A new manhole will need to be installed in Atxax Way, west of the clinic site. Cost of the extension and manhole are the responsibility of the City, whereas the cost of the service line (100 feet) will be included in Denali Commission funding. The approximate cost of the sewer line extension is $40,000.

In addition to the sewer main extension, the existing gravity sewer line must be repaired approximately 100 feet downstream of where the extension will connect. The sewer main crosses a creek at this location and there is a sag in the line at the crossing. This repair must be made before the gravity sewer line upstream is usable. The cost of this repair is the responsibility of the City and is estimated to be $25,000.

Figure 7.4: Photograph of Existing Downstream Sewer Main in Need of Repair

Approximate locations of the utility extensions and services are included in Figure 7.3.

7.3 Site Surface Preparation, Access, and Pad Installation

A surface layer of compressible peat and organic silt blankets much of the area. Volcanic ash forms a silty sand and sandy silt that is intermixed with old topsoil horizons, resulting in a highly compressible material near the surface comprised of peat and organic silt with sand. This overburden material needs to be removed from the site and disposed of in an alternate area. The clinic pad will then be placed on the stiffer underlying native material. The fill pad will have a proposed final elevation of 99 feet, and will vary in depth, depending on the amount of fill needed. It will consist of a gravel and sand mixture and will be placed in 12-inch lifts, with each lift compacted to a 95% relative compaction.

The preferred site (#7) is located on a side slope of a hill. Figure 7.3 shows a preliminary site plan, which places the building along the flattest area on the lot. However, because of the large size of the building, parking and access to the site is limited. The entrance driveway area to the parking lot has the potential to have steep grades (10+%), if the parking lot remains at the same

elevation as the building pad. To minimize the grades in the area, several ideas can be investigated during the design phase of the project. These ideas include, but are not limited to: providing a parking area above the clinic pad with an access ramp to the front entrance of the building; providing parallel parking along the front side of the building, changing the floor plan of the clinic to be more compact, or providing a retaining wall near the southwest face of the building to diminish fill slopes along the steepest portion of the hill.

Upgrades to the existing access road will also need to be accomplished. One option for the road to the clinic is to utilize an existing path used to access the water tank and future shelter building near the preferred clinic site. Upgrading this access road would include re-grading and adding additional material to fill in low areas, as necessary. The grade for the existing access road is approximately 11%. Another option for access to the clinic site would be to construct a new road stemming from the fork at Atxax road and create an alignment along the cross slope of the hill to the proposed clinic location. This option would need additional land acquisition for the roadway and road right-of-way. The slope of this new access road would be approximately 6%.

Material for the site pad and access road will be taken from the existing borrow pit in the community or from beach deposits. The pad will be graded to provide drainage of surface water away from the clinic. An initial estimate of the amount of material needed for the site pad and parking area is 5,000 cubic yards.

7.4 Overall Cost Estimate

In order to apply for funding to build the new health care facility, the City will need an indication of the total project costs for clinic construction. Various companies have assembled cost estimates for the clinic in the past. Table 7-1 consolidates the four estimates completed for building a new health care facility. In order to compare the various cost estimates, they have been broken down and reported by $/square foot costs.

Table 7-1. Cost Estimate Range for New Atka Health Clinic

Cost Estimator	Estimate ($/sf)
ANTHC	$348.00
HDR & ECI/Hyer	$566.00
HMS	$653.00
DOWL	$679.00

These estimates include base construction (using regionally adjusted construction costs and Davis Bacon wages), medical equipment, construction contingency, design fees, and construction administration. There is some variety between the compiled cost estimates, with a $331/sf difference between the lowest and highest estimate. The average construction cost per square foot is calculated to be $561.

To determine an overall cost estimate for the proposed new clinic, HDR and ECI/Hyer, Inc. (ECI/Hyer) obtained a base construction cost estimation. HDR and ECI/Hyer compiled their estimate from a series of discussions with two separate cost estimators, Estimations Incorporated and HMS Incorporated (HMS). The design team from HDR and ECI/Hyer also compared the

Atka Clinic cost estimate with their experience on projects occurring in the Aleutian chain and throughout rural Alaska, including a clinic in King Cove. Based on these investigations and comparisons, HDR and ECI/Hyer gave a cost estimate of $385/sf for building costs and a 47% markup to account for purchasing medical equipment, construction contingency, general design, interior design, and construction administration giving a total construction cost of $566/sf. The cost estimate also allows for a 1-year 3% inflation escalation to account for the difference in time between estimation and construction.

This cost estimate assumes some efficiency of scale due to the collection of civic and corporate offices within the community building. HDR and ECI/Hyer felt the cost estimate from ANTHC was too low to account for the cost and location factors for such a rural community. The cost estimate from HDR and ECI/Hyer is in the middle of the reported estimates range and is nearly the average of the four values. Based on the building cost estimate from HDR and ECI/Hyer and additional site preparation costs, the overall cost for the new combined clinic building is estimated at $2,523,581, as compiled in Table 7-2.

Table 7-2. Total Projection Cost Estimate for New Atka Health Clinic Building with Additional Offices

	Unit	Quantity	Unit Cost**	Escalation (1-year)	Total Cost
Primary Care Clinic	SF	2,202	$385	3%	$873,203
Civic Offices	SF	1,534	$385	3%	$608,308
Corporate Offices	SF	719	$385	3%	$285,119
Site Work	LS	1	$40,000		$40,000
Utilities	LS	1	$50,000		$50,000
			Construction Subtotal:		**$1,856,630**
			Project Costs:		
			Clinic Medical Equipment	17%	$148,445
			Construction Contingency	10%	$185,663
			General Design Fees	8.5%	$157,814
			Clinic Interior Design	1.5%	$13,098
			Civic & Corporate Interior Design	1.5%	$13,401
			Construction Administration	8.0%	$148,530
			Total Construction Cost		**$2,523,581**
			Denali Commission Design Funding		**$170,912**
			Civic & Corporate Design Funding		**$13,401**

Assumes typical concrete masonry unit foundation, includes utilities within 5 feet of building

** From Discussion with HMS Inc on May 7, 2002

The total construction costs estimated include the site preparation and the 150-foot utility extension for the wastewater line. It also accounts for mark-ups for design and construction contingency and administration.

In order to obtain Denali Commissioning Design Funding the costs have been reported in further detail to separate the clinic costs from the building costs for the shared offices in the new facility.

If a stand-alone clinic building were built using the same cost assumptions, the cost would total $1,379,994, shown in Table 7-3.

Table 7-3. Total Projection Cost Estimate for New Atka Health Clinic (Stand-alone Clinic)

	Unit	Quantity	Unit Cost**	Escalation (1-year)	Total Cost
Primary Care Clinic	SF	2,202	$385	3%	$873,203
Site Work	LS	1	$40,000		$40,000
Utilities	LS	1	$50,000		$50,000
			Construction Subtotal:		**$963,203**
			Project Costs:		
			Clinic Medical Equipment	17%	$148,445
			Construction Contingency	10%	$96,320
			General Design Fees	8.5%	$81,872
			Clinic Interior Design	1.5%	$13,098
			Construction Administration	8.0%	$77,056
			Total Construction Cost for Clinic		**$1,379,994**

Assumes typical concrete masonry unit foundation, includes utilities within 5 feet of building

** From Discussion with HMS Inc on May 7, 2002

This total includes the site work and utility construction as well as the costs for clinical medical equipment, construction contingency, general and interior design, and construction administration. The costs for adding the extra space for the civil and corporate offices totals $1,143,586. These construction costs includes a construction contingency, general and interior design, and construction administration costs.

8.0 CONSTRUCTION FUNDING

It is recommended that the following issues be addressed or documented as possibilities of a cost share match for future construction funding.

- Site land value including improvements. (Improvements that are pertinent include city crews providing and placing materials for an access road and pad.)
- Documentation of Architecture and Engineering professional services for the specific project site. (This report will accomplish this issue.)
- Documents committing applicant cash to the project. (Including bank account records.)
- Letters of commitment from grant agencies identifying specific dollars allocated, when the funds are available, and a definition of the specific scope of work authorized.
- Documents of bank loans

Completion of the necessary sewer main extension to within 150 feet of the proposed structure will also increase the chances of full construction funding. This is explained in more detail in Section 7.2.

There were several issues regarding the funding and size of the clinic that were raised during the completion of the concept plan. The concept plan was delayed until these items were addressed. The final Assessment and Inventory Report dated March 29, 2002 included a recommendation that Atka receive funding for a mid-size clinic. Concept planning proceeded based on the contents report. The concept plan was nearly completed and it was discovered that an error had been made and the Denali Commission would only fund a small-size clinic and not a mid-size clinic. The City of Atka was offered the option of appealing the size determination. An appeal request was submitted on May 1, 2003; the appeal was approved on August 25, 2003. The justification for the appeal was based on the distance of Atka from any other medical services and the need to provide space for dental and other itinerant health care services. This report and estimate is based on the mid-size clinic.

9.0 LAND STATUS

The Native Village Corporation in Atka, Atxam, is incorporated and organized under Section 8 of ANCSA. A total of 148 people are enrolled as shareholders in the Corporation, giving Atxam a land entitlement of 92,160 acres of land under ANCSA §12(a), and a 12(b) entitlement of 10,757 acres, for a total of 102,917 acres. Atxam selected 12,500 acres of deficiency land around Canoe and Pavlof Bay (located on the Alaska Peninsula) to meet its total entitlement, since there was insufficient land on Atka Island to satisfy its total ANCSA selection. The corporation received title to the majority of its lands in 1979.

Executive Order 1733, dated March 3, 1930, withdrew 2,899,000 acres as a Wildlife Refuge in the Aleutian Islands, including Atka Island. This withdrawal was modified by the Alaska National Interest Lands Conservation Act (ANILCA) in December 2, 1980, but the area is still within the jurisdiction of the Aleutian Islands Wilderness Refuge.

In 1971, when ANCSA withdrew the land around the Village of Atka for selection by the corporation, Atxam selected all lands within the community with exception of 0.90 acre of land previously withdrawn under an Executive Order. This tract, USS 2015, was an Executive Order withdrawal (5289) on May 4, 1930 for a school. The school site was later transferred to the Atka IRA Council.

9.1 14(c)(3) Conveyance Completed

Atxam is the owner of surface estate within and near the community of Atka and is required to transfer land to the City of Atka for community use and expansion pursuant to Section 14(c)(3) of ANCSA. The Bureau of Land Management in 43 Code of Federal Regulations (CFR) 2650.5-4 requires ANCSA Corporations to prepare and submit Maps of Boundaries depicting lands qualified as ANCSA §14(c) reconveyances to BLM. This process was recently completed. Figure 9.1 shows the final land status map of the area around the clinic. Several tracts of land were earlier conveyed to the State Municipal Land Trustee (MLT)/City of Atka in partial satisfaction of the Corporation's obligation.

These tracts include land for a clinic, boat repair/carpentry shop, Atka School, and fire station, and were transferred to the State MLT under 14(c)(3) by a metes and bounds description since the land was not yet surveyed. When the City became incorporated under State law, these tracts, with the exception of the school land (which was sold to the State Department of Education), were transferred to the City of Atka. Atxam also transferred land for the Airport Property to the State of Alaska under ANCSA Section 14(c)(4).

Additional land for the expansion of the airport will be conveyed to the City of Atka under ANCSA 14(c)(3). The corporation transferred land for public housing in the Atka Subdivision to the City in 1982 under 14(c)(3). The City transferred the land to the Aleutian Housing Authority. The Corporation transferred land for a Dock in 1996 and the roads from the airport to the Dock to the City of Atka under 14(c)(3) by a Quitclaim Deed in 1994. This deed conveyed the property interests in easements and rights-of-way (ROW) to the City of Atka.

The preferred site that was selected for the clinic was deeded to the City in July 2002, pursuant to the preparation of the final 14(c)(3) map of boundaries (Figure 9.1).

Atxam and the City of Atka have been working together to complete the identification of present and foreseeable needs for land that would benefit all of the residents of Atka. A 14(c)(3) agreement has been reached between the parties and completely fulfills the Corporation's obligation under Section 14(c)(3) of ANCSA.

APPENDIX A
Existing Facility Assessments

APPENDIX B
Community Survey Results

APPENDIX C
Resolutions